

Title (en)

Electric power steering apparatus for automobile

Title (de)

Elektrische Servolenkeinrichtung für ein Kraftfahrzeug

Title (fr)

Dispositif d'assistance électrique de direction de véhicule automobile

Publication

EP 1764285 B1 20081203 (EN)

Application

EP 06250896 A 20060220

Priority

KR 20050087470 A 20050920

Abstract (en)

[origin: EP1764285A1] An electric power steering apparatus for an automobile includes a steering shaft (102) connected to a steering wheel of the automobile; a pinion shaft (104) having an upper end connected to the steering shaft; a torque sensor (121) for sensing torque generated by rotation of the steering shaft; an electronic control unit (123) adapted to receive an electrical signal from the torque sensor; a motor (130), driving of the motor being controlled by the electronic control unit; a reduction mechanism (140) having a worm shaft (210) and a worm wheel (203), the worm shaft having a worm formed on an outer peripheral surface of the worm shaft, the worm shaft being contained in a housing (301), the worm wheel being formed on a side of the steering shaft, the reduction mechanism being driven by the motor; a support member (303) for enclosing an end-side outer peripheral surface of the worm shaft; and an elastic member (305) for applying elastic force to the support member in a direction slanted away from an axial direction of the worm shaft. The gap between the worm wheel and the worm shaft is compensated for and backlash is avoided. Since a single elastic member is used, the number of components is reduced, the manufacturing process is simplified, and the manufacturing cost is reduced.

IPC 8 full level

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CPC (source: EP KR US)

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Cited by

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Designated contracting state (EPC)

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DOCDB simple family (publication)

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